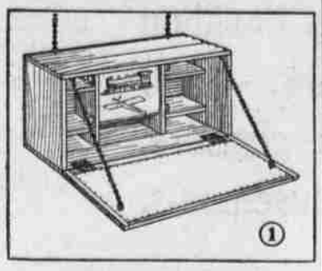
HANDICRAFT FOR BOYS AND GIRLS

By A. NEELY HALL and DOROTHY PERKINS

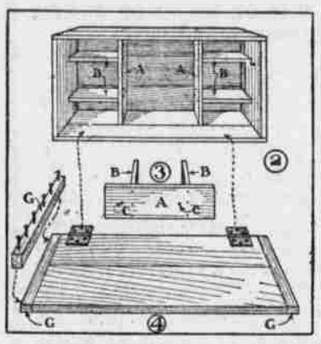
A HOMEMADE DESK WITH A PICTURE SCROLL.

Every boy can own a desk, because it is one of the simplest pieces of furniture to build. I have designed a great many desks for boys to make, but I believe that the one shown in Fig. 1 will be the most popular yet.

This desk is made out of a small packing-case, or a grocery box. Select the best-looking box you can find. Get



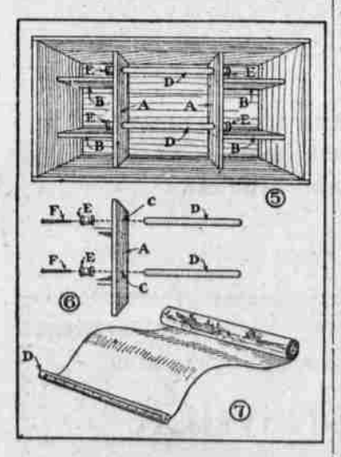
the cover boards, too, because you will need them for the hinged dropleaf. The first thing to do is to reenforce the nailing of any boards which show signs of coming loose. Then prepare the pigeonhole partitions. Fig. 2 shows the inside of the desk. Partitions A should be fastened seven inches each side of the center of the length of the box, or 14 inches apart, and shelves B should be so spaced that there will be a small top and bottom pigeonhole and a larger one between. Holes C in partitions A (Fig. 3) are provided for the rollers of the scroll to turn in. Bore the upper one about three inches below the upper end of A, and place the lower one ten inches or so below it. Nail partitions A to the end of shelves B; then stand these assembled pieces in the box, set a temporary brace between partitions A to hold them in the right position, and drive nails through the ends of the box into shelves B,



and through the top and bottom of the box into the ends of partitions A.

Cut the scroll rollers D (Figs. 5 and 6) from pieces of broom-handle, a trifle shorter than the distance between the partitions A, and get four large spools, such as crochet-cotton comes on, for the end knobs E (Figs. 5 and 6). Rollers D turn on the nail pivots F (Fig. 6), which must be long enough to run through the spool knobs E, through holes C in partitions A, and half an inch into the ends of the rollers. The spools must fit tightly on the nails. Wrap nails F with paper, and then coat the paper with glue so the spools will stick fast.

A tough wrapping-paper should be used for the scroll. Perhaps you can find a store dealer who has a roll of paper from which you can get the length you want in one piece. Tack the ends of this paper to the scroll rollers (Fig. 7). Be careful to get the



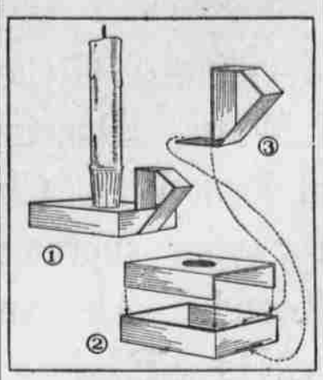
paper square on the rollers, so it will roll up evenly. The pictures should be put on before the scroll is pivoted in the desk. Cut out and paste these in place.

Fig. 4 shows how the box-cover boards are fastened together by means of the end battens G, and how the pair of hinges are placed for hinging this drop-leaf to the desk. To support the outer edge of the drop-leaf, when the desk is open, a pair of chains must be provided. Screw screw-eyes into the drop-leaf and the other side of the desk, to attach the chains to.

Putty all joints and nail holes. Then a coat of stain, or two coats of paint or white-enamel, will complete the desk. By screwing a pair of screw-eyes into the top, the desk may be suspended from a picture-molding; or it may be hung upon a pair of long hooks screwed into the wall.

HOME-MADE CANDLE STICKS.

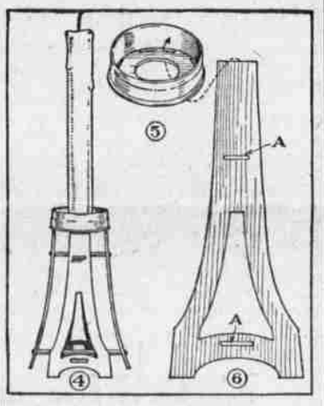
The candle stick in Fig. 1 has a base made of a small cardboard box (Fig. 2). In this box is fitted a piece of cardboard having its edges turned



down and a hole cut through its center to receive a candle (Fig. 2); glue the turned down edges to the sides of the box. Fig. 3 shows how to fold a cardboard strip for the handle. One end of this is stuck through a slot in one side of the box and is glued to the box bottom; the other end is slipped into the box and glued to the side.

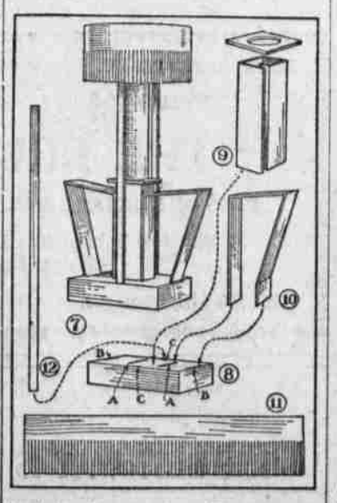
The candle stick in Fig. 4 is of a more ornamental design. A pill box forms the top. Fig. 5 shows how a hole is cut through the center of the box bottom for the candle to slip through, also how slots are cut through the bottom to receive the ends of the four supports. A pattern for the supports is shown in Fig. 6. Fig. 4 shows the relative proportions of the box top and the supports. The two slots A (Fig. 6) are provided for the cross strips to stick through. Fig. 4 shows how these cross strips connect and brace the supports. The upper pair of braces support the candle. Glue the ends of the crosspieces in slots A, and glue one crosspiece to the other at their intersection.

In Fig. 7 we have a candle stick with a simple shade. The base is a small cardboard box, turned bottom side up (Fig. 8). The center post mounted upon the base is in reality a



sleeve that fits over the lower part of the candle (Fig. 9). This post is folded out of one piece of cardboard, and a flap is provided on one edge to lap and glue to the other edge. The top cap projects over the sides of the support all around, and has a hole cut through its center large enough for the candle to slip through. This post is glued to the center of the base, and is braced with the candle stick handles (Fig. 10). After preparing the handles, cut the two pair of slots A and B (Fig. 8) through the base, for the handle ends to stick through. Glue the inner upright of each handle to the candle post, glue the end of the outer upright to the ends of the box, and glue the end of the inner upright to the box bottom.

The candle shade is made of a band of cardboard bent into a ring and covered with a strip of paper that has been slashed along its edges (Fig. 11) to form fringe. Red paper will look



best for the covering. The supports for the shade are a pair of cardboard strips (Fig. 12). Glue the upper end of these to the inside of the shade; stick the lower end through a pair of slots in the base (C, Fig. 8) and glue to the box sides.

SCIENTISTS WILL WIN THE NEXT WAR

NIKOLA TESLA, electrical scientist, says not armies alone but whole populations will be destroyed by use of wireless currents—His own air torpedo deadly

NIKOLA TESLA

IN THE science which man has spun out of his brain he has created a monstrous Frankenstein, which is now rending him limb from limb on the battlefields of Europe. But one of the fatal qualities of science is that it always progresses. What part will it play in the next world war? Will the inventive intellect by then have unloosed forces which, compared to the 42-centimeter howitzer of today, will be as the 42-centimeter gun is to the two-handed sword of the Roman legions? Yes, reply the experts; the present war is based on chemistry; but future warfare will wield the enormously more gigantic power of destruction provided by electricity, according to a writer in the St. Louis Post-Dispatch.

Then it will not be a question of the annihilation of armies; it will be one of the extermination of whole populations. It will not be a matter of demolishing cities and fortresses, but of wiping whole nations at one stroke from the face of the earth. The scientists, in fact, offer us one ultimate alternative: Either man must conquer his innate murderous instincts and cease from war, or else in the end the human race will perish in a universal act of suicide such as Schopenhauer foretold—self-slain by the unspeakable agencies of destruction with which science will inevitably arm us.

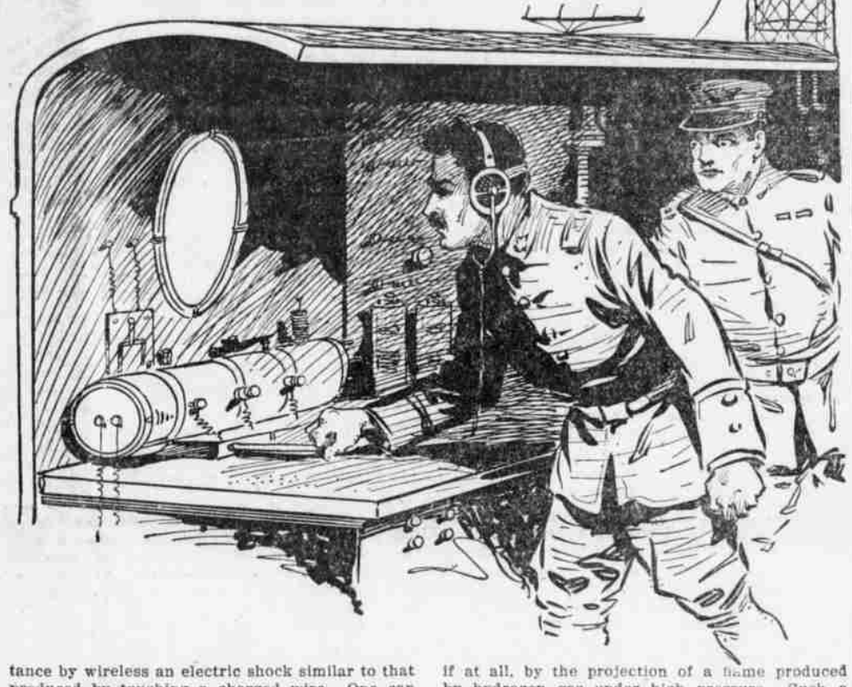
For 600 years, gunpowder and its derivatives have ruled the destinies of mankind. A flash from the pestle of the scientist-monk, Roger Bacon, blew feudalism off the globe, and made possible the coming of democracy. Gunpowder gave to the European races sway over the whole world; it subjected to them America, Asia and Africa. Little did Bacon dream of these consequences from his experiment with saltpeter and sulphur. Perhaps as little do we today realize the possibilities of the wireless current which in an instant bears the spoken word from Arlington to Honolulu.

In the imagination of every scientist in the world today there is a vision of a machine with a key by means of which a wave of electricity will be flashed through the air to explode the enemy's bombs, torpedoes, cartridges and magazines. The man who first perfects this device will go down in history—if any historians are left alive—as a greater man than Roger Bacon, for his invention will make lyddite and picric acid obsolete, and will send rifles, cannon and dreadnaughts to the junk heap.

Only one scientist so far makes a claim to have advanced some steps towards the perfect electric man-killer. But that man is no other than Nikola Tesla, electrical wizard, who has just been awarded a part of this year's Noble prize for physics. In an interview the other day he laid down these prophesies:

1. This is the last war in which the explosive power of chemicals will decide the issue.
2. In the next war electricity will be the force of organized slaughter.

The confidence with which Tesla uttered these predictions is based upon an invention which he says he has just completed, but the details of which he is for the present jealously guarding, for fear they might be worked out by one of the belligerents in the present war. In case the United States were involved in war, however, he says he would place his device unreservedly at the disposition of the military authorities.



"It is, of course, possible," he said to a representative of the Post-Dispatch Sunday Magazine a few days ago, "to produce electrical effects at a distance by means of wireless energy. But the insurmountable difficulty thus far has been to aim an electric wave in one direction only, with all of its force concentrated on a given target.

"I will go so far as to say that after twenty years of application to the problem of transmitting energy by wireless, I have just made a valuable advance in this direction. The stage has been reached where to an extent it is practicable to use this force in war, and to predict such a development as will make electricity supplant cannon in battle.

"It is impossible to give details at this time, but in a general way my invention can be used in three methods.

"In the first place, it will be possible to send an explosive body through the air—an aerial torpedo flying many times faster than an aeroplane—and to direct this projectile to the spot desired, where it can be exploded by wireless. It will be possible to guide the projectile by wireless after it has passed beyond the range of the eye, and the aim is so accurate that it is possible to reduce the error to a few feet in a thousand miles.

"In the second place, it will be practicable with this apparatus to produce effects at a distance which will interfere with the enemy and tend to make him ineffective.

"In the third place, it promises to be able to produce at a distance such effects of electrical tension as will jeopardize life and property."

The inventor declined to go into specific details, saying that it is safer to be specific after the fact. But one would gather from the words he did speak that he has contrived a torpedo of the air flying under its own power as a torpedo swims in the water, which can be steered by wireless and exploded by the same force. Such a projectile would have a range not of some twenty miles, like the highest power cannon, but one limited only by its own flying endurance. It would be harder to hit with shell and rifle fire than an aeroplane, because of its smaller size and swifter velocity, and it need not be manned by a crew who would be exposed to death at every instant.

Such a missile, aimed according to the mathematical formulas used today by gunners whose target is beyond the range of eye and telescope, could be dispatched for the destruction of a battleship long before her own guns would be able to come into play. Safe from the shells of the greatest ordnance, it could start from a point miles beyond their range and destroy the batteries without the possibility of a reply.

The second and third methods of which Tesla speaks are discussed in rather cryptic language, but leave the inference that he believes himself already able, in some degree, to produce at a distance by wireless an electric shock similar to that produced by touching a charged wire. One can think of no other way in which effects perilous to life and property could be obtained with electricity.

With this idea worked out to its ultimate perfection, one might foretell such appalling events in warfare as this: An entire army, in its trenches, is without warning seized with the death agonies of a wretch in the electrical chair, and is exterminated by a silent enemy, using no bullets. Or, at a given moment, every living thing in a great city is struck dead as if by lightning, by means of a force unleashed hundreds of miles away by an officer who merely pulls a lever in a wireless tower.

Tesla appears to see in the future a warfare of electrical appliances more deadly than all the cannon ever made; he sees entire areas electrified and made untenable for any living creature. Death and destruction will be dealt out at unheard of distances, with zones of action more spacious than we now dream of. There is foreshadowed a conflict in which not armies but nations may be destroyed in a single action, by men armed with thunderbolts more mighty than those of the heavens. No wonder that Tesla, his own imagination recoiling in horror, says:

"I hope this is the invention that will make war impossible."

Another device for which inventors are seeking is one that will be able, by means of the wireless current, to explode at a distance the enemy's magazines of ammunition. If this were perfected, one man in London, by pressing a button, could set fire to all the explosives in the Krupp factories and blow that institution into bits; or he could blow up all the cartridges and explosives in the German army. Or another man in Berlin could with one stroke blow the English fleet out of the water with its own powder. In an article in a Paris newspaper recently, Marconi, father of wireless telegraphy, declared that such an invention would mean the abolition of firearms and a reversion to hand-to-hand fighting.

A Dutch inventor named Lanzius, now in New York, claims to have made such a device. An Italian inventor won considerable notoriety for himself two years ago by demonstrating an apparatus which he declared would explode ammunition at a distance by means of a wireless current—but he was shown to be a fraud. A young New Yorker, who already has several authentic inventions to his credit, declares he has perfected a method of emitting wireless current which will melt all metals within a certain radius. A California inventor asserts that he can create a flame at a distance by means of wireless, and offers to set fire to any fleet approaching the Pacific coast.

The Germans are reported to have used heat to destroy the barbed-wire entanglements of the Russians. Tesla believes that the result was obtained, if at all, by the projection of a flame produced by hydrogen gas under high pressure. Such a flame can readily be projected for 10 feet, which might be sufficient when the trenches are close enough together. In such a flame barbed wire would melt like wax.

In all of the belligerent countries, and in those which fear they may sometime become belligerents, the best brains are hard at work on the problem of contriving new methods of murder more deadly and more wholesale than those now employed. Some of their dreams of future warfare may seem fantastic. But the rude cannon of the Turks seemed an incredible prodigy at the siege of Constantinople in the fifteenth century; and to the artillerymen of our Revolutionary war the machine gun of today would appear an equal marvel. On can scarcely doubt that if man continues to maintain his delight in war, science will be at hand to supply him with weapons as advanced in murderous power over those today, as the arms of today surpass the sling and stone with which David, introducing the artillery of his era, slew the armored giant. Will human nerves be able to endure these colossal horrors? Probably; today they endure the shock of explosives, the sound of which would have sent Achilles to the madhouse.

TEST OF YOUTH

You often see a woman at the market pinching the end of a chicken's breastbone to find out how tender—in other words, how young—the fowl is. Oddly enough, the same test with human beings is one of the most reliable known. If in advanced life the lower part of your breastbone feels elastic when pushed inward, you may assume that no important changes have yet taken place in your arteries, or otherwise in your anatomical make-up.

The human breastbone is shaped like an ancient Roman sword, and the upper part of it is like the sword handle. Its point is a piece of cartilage, which anatomists call the "xiphoid" cartilage. The early hardening and stiffening of it indicate that the changes that accompany old age have prematurely begun.—Youth's Companion.

OR THEY WOULD BE MUCH TROUBLE.

As a rule women look at things differently from men—and it's a good thing for most husbands that they do.—Indianapolis Star.

Mrs. Kawler—Do you consider Alice very good looking?

Mrs. Blunderby—Oh, Alice is pretty enough; but I wouldn't call her an Adonis.

ELECTRIC FURNACES

An electric furnace for the heat treatment of steel used in automobile construction has been introduced. Its method of producing uniform, dependable heat that is so urgently sought by automobile manufacturers is quite novel in electric furnace practice, although its principle is comparable to that of the well-known Nernst lamp. Both the floor and the domelike covers of this furnace are of a refractory material which is practically nonconducting at ordinary temperatures. To start the furnace, a current is passed through a bed of coke laid on its floor. On being sufficiently heated the floor becomes a conductor and in turn heats the wall and top, rendering them conductive, until finally the entire furnace becomes incandescent. It is stated by those who have tried the furnace that its use in the heat treatment of automobile parts promises to be extensive in the future.

DEFINED.

Knicker—What are a congressman's duties?

Bocker—To run, sit, lie and stand.

HEMMED IN.

"How did you get that stitch in your side?"

"Oh, I got hemmed in a crowd."

Far-Fetched Idea.

"Care much for astronomy?"

"Not a great deal," replied the slightly pessimistic man. "But some phases of the science interest me."

"For instance?"

"There are the Martians, you know. They are said to be farther advanced than we are. Since the war in Europe began I have had such a poor opinion of humanity in general, that I like to think there are people somewhere in the universe whom I can regard as superior beings."

The Actress and the Role.

"Playing Katherine in 'The Taming of the Shrew' brought me much satisfaction, but a very bad reputation for temper," Ada Rehan said.

"I have often been amused at seeing the effect that a first performance of the 'Shrew' in a strange place produced on the employees of the stage. They shunned me as something actually to be feared.

"During a long run I have heard it said that I hated my Petruchio. I looked upon this as a compliment."

CONDENSATIONS

Russia is said to be the only warring nation whose people are actually growing more prosperous during the conflict, change and the forced development of new industries explaining the rest of it.

In some of the small streams in the interior of Honduras there is a peculiar small fish whose eyes protrude above the surface of the water, serving probably as insect-hunting periscopes.

A substitute for gold is obtained by combining 94 parts of copper with six parts of antimony and adding a little magnesium carbonate to increase the weight. It is said that this alloy can be drawn, wrought and soldered very much like gold, and that it also receives and retains a golden polish. It is worth something like 25 cents a pound.

In the Southern Pacific a large undersea desert was recently discovered. Over its whole area not a vestige of plant or animal life could be found.

The tuberculosis death rate of New York, Philadelphia and Boston combined declined from 308.6 a 100,000 population in 1882 to 164.6 in 1914. The 1914 death rate was, therefore, only 43.2 per cent of that of 1882, or, to put it the other way, the death rate of 1882 had by 1914 fallen 56.8 per cent.

Cellulose from wood fiber is being used in Europe as a substitute for absorbent cotton, which has become relatively scarce because of the war demands.

Russia and Serbia, also Austria, may allow young women to fight in their armies, but Canada will not, although, according to a recruiting officer in Winnipeg, several have applied, and two could hardly be kept from joining by force in response to a call for "stenographers for the second service unit of the Nineteenth battalion."

Geologists are trying to estimate the ages of the oceans by comparing the amount of sodium they contain with the amount they receive annually by washings from the continents.

Home Town Helps

GET THE LOT CLEANED UP

Sound Common Sense in Having Vacant Property Present an Attractive Appearance.

Have you a lot or a block of lots you wish to put on the market the coming season? Are they rough? Are they weedy or brushy? Have they been made more or less of a dumping ground for the past years? If so, you will have two chances to one of selling them if you take the trouble to put them into sale shape, says the Minneapolis Journal.

A wise man selling a horse would see to it that the animal was in good flesh and good coat before putting him in the sale stable. Any grocer knows that he can sell more goods if his wares are attractive to the eyes of the prospective customer. No merchant will risk his sales to the imagination of the customer.

The average buyer of a city lot is not gifted with a rosy, constructive imagination. He cannot make a mental painting of a beautiful home grounds out of a rough and ragged vacant lot. In selling anything, from a pair of trousers to a city lot, the salesman should have the help of good looks in his goods in order to make a quick or profitable sale.

It costs little to put the average open, vacant city lot into sale form. If but the front third of the lot were smoothed, grassed, clipped regularly and one door-yard tree properly planted and kept the lot would have two chances of a sale where it otherwise would have but one.

You may add this little expense to the sale price, if you like, and it will not hinder the sale. If you put your rough property into an agent's hands you should not be disappointed if it is left lying at the season's end, or if the agent is obliged to shade the price to cover the ugliness of the lot.

GARDEN EVER WORTH WHILE

Plot of Land Need Not Cost a Great Deal of Money, But Deserves Careful Thought.

Now that the value of architectural garden features is becoming more universally recognized, it behooves the homebuilder to give the matter due consideration. Few houses are too modest or have grounds too small to permit some such interesting touch. It may be a simple arbor seat, a trellis or even a garden gate, but whatever the architectural features are, the fanciful or grotesque should be avoided and only artistic simple lines be employed.

The question of the material employed in these features is of the utmost importance. A close relationship should be maintained between the materials here and those employed in the adjacent buildings.

While it is not necessary in all cases that a stated material be used, the style and details of the house should always suggest the nature of the garden features; as, for instance, a brick country house of colonial style with exterior trim of which would naturally call to mind visions of white trellis work, white wood pergola or a white arbor along simple colonial lines.

Better Cities, Not Bigger.

It is not a very important fact that Providence is a city of more than 250,000 inhabitants. It has passed the quarter-million mark within a few months, and there is a sentimental satisfaction in knowing it, but it is of more importance that we are developing our harbor resources under a combined federal, state and city scheme; that a city plan commission is constantly studying ways and means to make the city more beautiful; that the habit of public generosity is growing among us; that larger and more frequent sums are being given to good causes, and that the sense of community and co-operation is on the gain. We are glad that Providence is steadily increasing in population, but we ought to be yet more glad that it is also growing better.—Providence Journal.

Glad Hand for Visitors.

Haddonfield, N. J., has hit on a new scheme to make visitors feel they are welcome. In most towns roads entering them are marked with signs calling attention to speed laws and other regulations. Haddonfield is erecting a new sign, which reads:

THANK YOU.
COME AGAIN.

These signs face toward the town, so that they are read as the visitor drives out across the borough line. Such signs will be placed along the borough line at every road or driveway. They are large and elevated. The background is black with large white letters. The attitude is that such a movement will advertise Haddonfield, rather than make the visiting motorist feel that he is suspected of being a speeder.

A Hint.

"Kind sir, you behold me a child of nature—starving."

"On your way. You're the fourth 'touch of nature' I've had this morning."

Appropriate.

"I want a pair of earrings, cheap but purty. They be fur a present." "Yes, sir," said the jeweler. "You want something rather quiet, I suppose?" "Well, doan't 'ee go to making they too quiet, now," replied the farmer. "My girl be deaf in one ear."—Tit-Bits.

His Views.

"In case of war, what do you think we ought to have in addition to the general staff?" "I think we ought to have an advisory board of moving picture actresses."